



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,091	09/17/2002	Fang-Chen Luo	5486-US-PA	4158
31561 7590 05/18/2007 JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE 7 FLOOR-1, NO. 100 ROOSEVELT ROAD, SECTION 2 TAIPEI, 100 TAIWAN			EXAMINER RUDE, TIMOTHY L	
			ART UNIT 2871	PAPER NUMBER
			NOTIFICATION DATE 05/18/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

UAS@JCIPGROUP.COM.TW

Office Action Summary	Application No.	Applicant(s)	
	10/065,091	LUO ET AL.	
	Examiner	Art Unit	
	Timothy L. Rude	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7, 10, 11, 13, 24-33 and 44-59 is/are pending in the application.
- 4a) Of the above claim(s) 24-33 and 44-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 10, 11, 13 and 56-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20070122.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 22 January 2007 has been entered.

Claims and Claim Objections

Claims 6, 8, 9, 12, 60, and 61 are canceled by Applicant. Claims 1, 13, 56, and 59 are amended.

Independent claims 1 and 56 (and consequently all their dependent claims) are objected to as having limitations drawn to a non-elected species. Applicant elected Group I, species 1, drawn to *inter alia* a dielectric layer on the first substrate, in the reply filed 08 September 2004.

Claims 1 and 56 contain newly added limitations drawn to a color filter layer on the first substrate (as opposed to the previously examined transparent dielectric layer on the first substrate that may include a color filter layer [see original claim 8]) wherein the first transparent conductive layer is conformably over the color filter layer (as

Art Unit: 2871

opposed to the previously examined first transparent conductive layer over the transparent dielectric layer on the first substrate [see original claim 1]).

Originally presented claim 8 is drawn to a dielectric layer that includes a color filter layer and wherein the first transparent conductive layer is over the dielectric layer. The first office action on the merits did not include examination of any claim having a color filter layer on the first substrate that is in full contact with the conformal reflective layer wherein a first transparent conductive layer is conformably over the color filter layer. Therefore, species wherein a color filter layer is on the first substrate that is in full contact with the conformal reflective layer wherein a first transparent conductive layer is conformably over the color filter layer is non-elected.

Please also note that such an amendment of claim 1 results in claim 13 being drawn to a device with color filters on both substrates [also a non-elected species].

Since there are other substantive amendments, the 22 January 2007 submittal is considered responsive. In order to better advance prosecution, examiner will examine claims in anticipation of an amendment removing the limitations drawn to the non-elected color filter layer on the first substrate wherein a first transparent conductive layer is conformably over the color filter layer [MPEP 706.07(a)].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 2871

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1-5, 7, 10, 11, and 56-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanada et al., (Tanada), US 2002/0054257 in view of Nakai et al., (Nakai), USPAT 6,144,429.

As to claims 1-4, 10, and 56-58, Tanada discloses and shows in Fig. 1, a liquid crystal display (LCD) structure comprising a first substrate panel (10) made of glass, a

Art Unit: 2871

second substrate panel and a liquid crystal layer (30) disposed between the first substrate panel and the second substrate panel, a plurality of pixel portions being formed by respective electrodes for applying a voltage to the liquid crystal layer, each of the pixel portions comprising:

- an organic insulating layer (11) such as photosensitive resin solution, such as acrylic resin (page 3, [0046]) over the first substrate panel (1), wherein the surface of the organic insulating layer has a plurality of protrude/recess structures thereon;

- a conformal reflective layer (12) over the organic insulating layer (11), wherein the conformal reflective layer serves as a reflector of light;

- a transparent dielectric layer (14) (insulating) over the conformal reflective layer (12), wherein the dielectric layer has a substantially planar surface (smoother upper surface than the bumpy organic insulating layer); and

- a first transparent conductive layer (15) over the transparent dielectric layer (14), wherein the conformal reflective layer (12) is electrically isolated from the first transparent conductive layer (15).

- wherein (Fig. 1) the transparent dielectric layer (14) includes a color filter layer (13).

- wherein (Fig. 1) the LCD structure further includes a second transparent conductive layer (25) over the second substrate panel (20) and the liquid crystal layer (30) between the second transparent conductive layer and the first transparent conductive layer.

Tanada does not explicitly disclose that the first conductive layer is connected to the TFT for controlling the liquid crystal layer.

Nakai discloses an LCD device (Fig. 13) having a first conductive layer (14) connected to the TFT (19) through the contact hole (22) and source electrode (25) for controlling the liquid crystal layer.

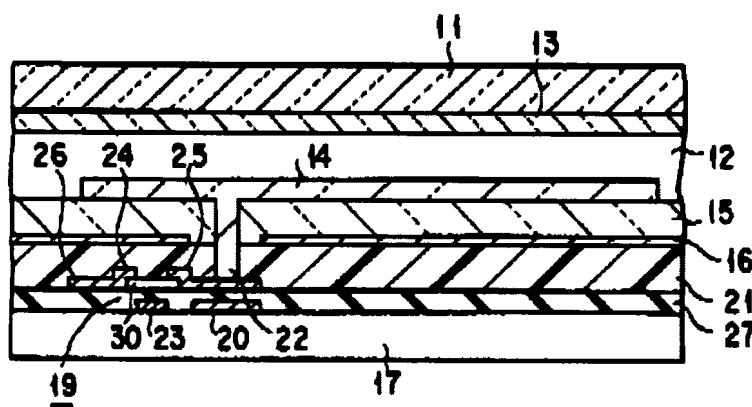


FIG. 13

Nakai is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add a first conductive layer (14) connected to the TFT (19) through the contact hole (22) and source electrode (25) for controlling the liquid crystal layer in order to provide a high efficiency of light utilization (col. 14, lines 59-60) in the control of the liquid crystals in addition to improved whitening, power savings due to a reduced resistance, and higher speed of operation (col. 4, lines 61-67). Ultimately, this not only provides improved picture quality (col. 4, lines 65-66), but also provides a

Art Unit: 2871

display device that is more easily controlled and is more stable for optimal performance (col. 2, lines 14-17).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Tanada with the first conductive layer (14) connected to the TFT (19) through the contact hole (22) and source electrode (25) for controlling the liquid crystal layer in order to provide a high efficiency of light utilization (col. 14, lines 59-60) in the control of the liquid crystals in addition to improved whitening, power savings due to a reduced resistance, and higher speed of operation (col. 4, lines 61-67) with improved picture quality (col. 4, lines 65-66), resulting in a display device that is more easily controlled and is more stable for optimal performance (col. 2, lines 14-17).

Accordingly, claims 1-4, 10, and 56-58 are rejected.

As to claims 5 and 59, Tanada discloses (page 5, [0078]) that his invention is also applicable to a three-terminal type (thin-film transistor: TFT) active matrix liquid crystal display. It is inherent for a thin film transistor to have a gate electrode, a source terminal and a drain terminal.

As to claim 7, Tanada discloses (page 3, [0053]) that the reflective layer (12) is composed of a metallic material having high reflectance, such as Al or Ag.

As to claim 11, Tanada also shows in Fig. 1 that the surface of the second substrate panel on the opposite side of the liquid crystal layer further includes a phase compensation plate (27) and a polarizer (28).

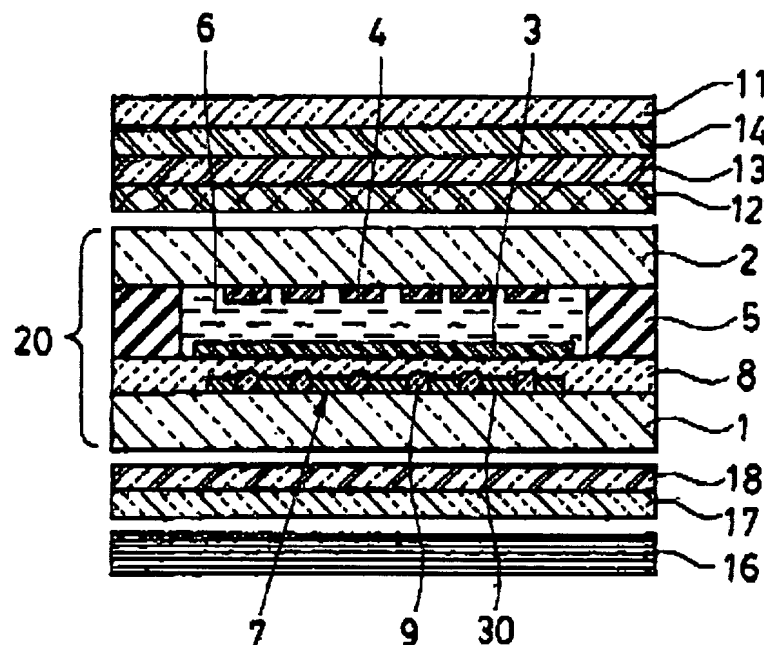
2. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanada in view of Nakai and further in view of Kaneko US PG PUB 2002/0145689 A1.

As to claim 13, Tanada in view of Nakai teach the LCD of claim 10 above.

Tanada in view of Nakai do not explicitly teach a display wherein the LCD further includes a color filter layer between the second substrate panel and the second transparent conductive layer.

Kaneko teaches a color filter layer between the substrate panel and the transparent conductive layer [Figure 1] and Kaneko teaches that one may use such color filters on either of the two substrates (col. 2, para [0024]) as an art recognized means suitable for the intended purpose of effecting a color display [MPEP 2144.07].

FIG. 1



Kaneko is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to make a display wherein the LCD further includes a color filter layer between the second (or first) substrate panel and the second (or corresponding) transparent conductive layer (col. 2, para [0024]) as an art recognized means suitable for the intended purpose of effecting a color display [MPEP 2144.07].

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Tanada in view of Nakai with

Art Unit: 2871

the color filter layer between the second substrate panel and the second transparent conductive layer (col. 2, para [0024]) as an art recognized means suitable for the intended purpose of effecting a color display [MPEP 2144.07].

Response to Arguments

Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L. Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Timothy L Rude
Examiner
Art Unit 2871

tlr


5/10/07